



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/789,537

02/26/2004

Hajime Nakamura

60931 (47762)

9442

21874

7590

09/19/2008

EDWARDS ANGELL PALMER & DODGE LLP

P.O. BOX 55874

BOSTON, MA 02205

EXAMINER

WOLDEKIDAN, HIBRET ASNAKE

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

09/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/789,537	<b>Applicant(s)</b> NAKAMURA ET AL.	
	<b>Examiner</b> Hibret A. Woldekidan	<b>Art Unit</b> 2613	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Examiner acknowledges receipt of Applicant's Amendments, remarks, arguments received on 05/27/08. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Miles et al. (6,665,495) in view of Duser et al. (Performance of a Dynamically Wavelength-Routed, Optical Burst Switched Network ©2001 IEEE).

Consider claim 1 Miles discloses a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme (**See Col. 6 lines 14-21, fig. 3-5 i.e. optical router(50 of fig. 3) that is used in optical communication network(100 of fig. 3) that perform multiplexing transmission at the ingress(60 of fig. 12a) and egress unit(160 of fig. 12b) of the optical router(50 of fig. 5) by allocating a plurality of traffic items(36) in the core controller (40 of fig. 5) using a wdm**

Art Unit: 2613

**transmission scheme(fig. 12a,12b)), comprising: a buffer that stores packets of input traffic (See Col. 20 lines 8-11, Fig. 13 i.e. a memory device(114) for storing incoming data packets); a packet transmission control section that fetches packets from the buffer (See Col. 21 lines 20-25, fig. 13 i.e. edge unit destination controller(116) that fetches packet from a memory device(114)), and, with top priority given to a semifixed initial path, distributes the packets to the initial path(See Col. 21 lines 20-25, Col. 22 lines 32-35, fig. 13 i.e. super packets being distributed from the packet classification Quene(114) to the edge unit destination controller(116) through paths(192). the prioritization mechanism is being employed while building the super packets . This shows that each of the sixteen super packets that is fetched from the memory device(114) has priorities. One can also conclude that the first data that is sent from the memory device(114) to the edge destination controller(116) through the first path(192) has the top priority); a control section that controls allocations of the additional paths based on distribution states of packet units in the packet transmission control section(See Col. 8 lines 43-58, Col. 9 lines 41-47, fig. 5 i.e. super packet scheduler(42) in the core controller(40) for scheduling packet distribution to the appropriate destination) ; and a wavelength path switching section that switches wavelength paths in accordance with the allocation control of the additional paths(See Col. 11 lines 50-64, fig. 5,6 i.e. optical switching unit(70) for switching optical paths to the appropriate destination based on the information received from the core controller(40)).**

Miles discloses allocating additional bandwidth based on the service requirements **(See Col. 21 lines 10-19)**.

Miles does not explicitly disclose distributing the packets to dynamically allocated additional paths.

Duser teaches distributing the packets to dynamically allocated additional paths in the same optical switching network **(See Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Miles, and distribute packets to dynamically allocated additional paths, as taught by Duser, thus providing a means to protect traffic overflow which result in packet loss by dynamically assigning additional path based on the traffic requirement, as discussed by Duser **(Page 2140 Section II Paragraph 3)**.

Consider claim 2 Miles discloses a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme **(See Col. 6 lines 14-21, Col. 24 lines 16-28, fig. 3-5,17 i.e. optical router(50 of fig. 3) which is used in optical communication network(100 of fig. 3) which perform multiplexing transmission at the ingress(60 of fig. 12a) and egress unit(160 of fig. 12b) of the optical router(50 of fig. 5) by allocating a plurality of traffic items(36) in the core controller (40 of fig. 5) using a wdm transmission scheme(fig. 17))**, comprising: a monitoring section

Art Unit: 2613

that monitors packets of input traffic that are distributed(See Col. 3 lines 15-20, Col. 9 lines 61-60, fig. 5 i.e. a core controller(40) for monitoring incoming data traffic ), with top priority given to a semifixed initial path, to the initial path (See Col. 21 lines 20-25, Col. 22 lines 32-35, fig. 13 i.e. super packets being distributed from the packet classification Quene(114) to the edge unit destination controller(116) through paths(192). the prioritization mechanism is being employed while building the super packets . This shows that each of the sixteen super packets that is fetched from the memory device(114) has priorities. One can also conclude that the first data that is sent from the memory device(114) to the edge destination controller(116) through the first path(192) has the top priority); a control section that controls allocations of the additional paths based on distribution states of packet units obtained by the monitoring(See Col. 8 lines 43-58, Col. 9 lines 41-47, fig. 5 i.e. super packet scheduler(42) in the core controller(40) for scheduling packet distribution to the appropriate destination); and a wavelength path switching section that switches wavelength paths in accordance with the allocation control of the additional paths(See Col. 11 lines 50-64, fig. 5,6 i.e. optical switching unit(70) for switching optical paths to the appropriate destination based on the information received from the core controller(40)).

Miles discloses allocating additional bandwidth based on the service requirements (See Col. 21 lines 10-19).

Miles does not explicitly disclose distributing the packets to dynamically allocated additional paths.

Duser teaches distributing the packets to dynamically allocated additional paths in the same optical switching network(See Page 2140 Section II Paragraph 2-3 i.e. **dynamically assigning packets to a free wavelength to protect traffic overflow**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Miles, and distribute packets to dynamically allocated additional paths, as taught by Duser, thus providing a means to protect traffic overflow which result in packet loss by dynamically assigning additional path based on the traffic requirement, as discussed by Duser (**Page 2140 Section II Paragraph 3**).

Consider claim 3 Miles discloses a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme (**See Col. 6 lines 14-21, fig. 3-5 i.e. optical router(50 of fig. 3) that is used in optical communication network(100 of fig. 3) that perform multiplexing transmission at the ingress(60 of fig. 12a) and egress unit(160 of fig. 12b) of the optical router(50 of fig. 5) by allocating a plurality of traffic items(36) in the core controller (40 of fig. 5) using a wdm transmission scheme(fig. 12a,12b)), comprising: a monitoring section that monitors packets of input traffic that are distributed(See Col. 3 lines 15-20, Col. 9 lines 61-60, fig. 5 i.e. a core controller(40) for monitoring incoming data traffic ), with top priority given to a semifixed initial path, to the initial (See Col. 21 lines 20-25, Col. 22 lines 32-35, fig. 13 i.e. super packets being distributed from the packet**

Art Unit: 2613

**classification Queue(114) to the edge unit destination controller(116) through paths(192). the prioritization mechanism is being employed while building the super packets . This shows that each of the sixteen super packets that is fetched from the memory device(114) has priorities. One can also conclude that the first data that is sent from the memory device(114) to the edge destination controller(116) through the first path(192) has the top priority); a first control section that controls allocations of the additional paths based on distribution states of packet units obtained by the monitoring(See Col. 20 lines 5-21, fig. 13,18 i.e. a first controller or a packet classification and destination queue controller(112 of fig. 13) in the ingress edge(60 of fig. 18) of the router(50 of fig. 18) that controllers the routing of the incoming packets to the appropriate destination of the packet classification queue(114)); a first wavelength path switching section that switches wavelength paths in accordance with the allocation control of the additional paths by the first control section(See Col. 20 lines 5-35, fig. 13,18 i.e. a first path switching section or a packet classification Queue(114 of fig. 13) in the ingress edge(60 of fig. 18) of the router(50 of fig. 18) that controllers the routing of the incoming packets to the appropriate destination) providing additional sets of packets based on the quality of service required); a buffer that stores packets of the input traffic (See Col. 20 lines 8-11, fig. 13,18 i.e. a packet classification Queue or memory (114 of fig. 13) in the ingress edge(60 of fig. 18) of the router(50 of fig. 18) for storing the input traffic); a packet transmission control section that fetches packets from the buffer (See Col. 21 lines 20-25, fig. 13 i.e. edge unit destination**



Art Unit: 2613

**controller(116) that fetches packet from a memory device(114)), and, with top priority given to the initial path, distributes the packets to the initial path (See Col. 21 lines 20-25, Col. 22 lines 32-35, fig. 13 i.e. super packets being distributed from the packet classification Quene(114) to the edge unit destination controller(116) through paths(192). the prioritization mechanism is being employed while building the super packets . This shows that each of the sixteen super packets that is fetched from the memory device(114) has priorities. One can also conclude that the first data that is sent from the memory device(114) to the edge destination controller(116) through the first path(192) has the top priority; a second control section that controls allocations of the additional paths based on distribution states of packet units in the packet transmission control section(See Col. 8 lines 43-58, Col. 9 lines 41-47, fig. 5 i.e. super packet scheduler(42) in the core controller(40) for scheduling packet distribution to the appropriate destination); and a second wavelength path switching device that switches wavelength paths in accordance with the allocation control of the additional paths by the second control section (See Col. 11 lines 50-64, fig. 5,6 i.e. optical switching unit(70) for switching optical paths to the appropriate destination based on the information received from the core controller(40)).**

Miles discloses allocating additional bandwidth based on the service requirements **(See Col. 21 lines 10-19).**

Miles does not explicitly disclose distributing the packets to dynamically allocated additional paths.

Art Unit: 2613

Duser teaches distributing the packets to dynamically allocated additional paths in the same optical switching network(See Page 2140 Section II Paragraph 2-3 i.e. **dynamically assigning packets to a free wavelength to protect traffic overflow**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Miles, and distribute packets to dynamically allocated additional paths, as taught by Duser, thus providing a means to protect traffic overflow which result in packet loss by dynamically assigning additional path based on the traffic requirement, as discussed by Duser (**Page 2140 Section II Paragraph 3**).

Consider claim 4 and 5 Miles and Duser disclose the wavelength path switching node apparatus according to claim 1, wherein the packet transmission control section distributes packets to the additional paths (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow**) and distributing packets in a predetermined order of priorities (**See Miles: Col. 21 lines 10-19 i.e. distributing packets in a predetermined time interval**)

Consider claim 6 Duser teaches the wavelength path switching node apparatus according to claim 1, wherein the control section allocates at least one reserve additional path when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**).

Consider claim 7 Duser teaches the wavelength path switching node apparatus according to claim 2, wherein the control section allocates at least one reserve

Art Unit: 2613

additional path when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**).

Consider claim 8 Duser teaches the wavelength path switching node apparatus according to claim 3, wherein the control section allocates at least one reserve additional path when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**).

Consider claim 9 Duser teaches the wavelength path switching node apparatus according to claim 4, wherein the control section allocates at least one reserve additional path when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**).

Consider claim 10 Duser teaches the wavelength path switching node apparatus according to claim 5, wherein the control section allocates at least one reserve additional path when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**).

Considering Claim 11 Miles discloses a wavelength path allocation method for a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission

Art Unit: 2613

scheme (See Col. 6 lines 14-21, fig. 3-5 i.e. optical router(50 of fig. 3) that is used in optical communication network(100 of fig. 3) that perform multiplexing transmission at the ingress(60 of fig. 12a) and egress unit(160 of fig. 12b) of the optical router(50 of fig. 5) by allocating a plurality of traffic items(36) in the core controller (40 of fig. 5) using a wdm transmission scheme(fig. 12a,12b)) comprising: a step in which packets of input traffic are stored in a buffer traffic (See Col. 20 lines 8-11, Fig. 13 i.e. a buffer or a memory device(114) for storing incoming data packets); a packet distributing step in which packets are fetched from the buffer(See Fig. 13 i.e. edge destination controller(116) that fetches packet from the buffer or memory device(114)), and, with top priority given to a semifixed initial path, the packets are distributed to the initial path (See Col. 21 lines 20-25, Col. 22 lines 32-35, fig. 13 i.e. super packets being distributed from the packet classification Quene(114) to the edge unit destination controller(116) through paths(192). the prioritization mechanism is being employed while building the super packets . This shows that each of the sixteen super packets that is fetched from the memory device(114) has priorities. One can also conclude that the first data that is sent from the memory device(114) to the edge destination controller(116) through the first path(192) has the top priority); and a step in which allocations of the additional paths are controlled based on distribution states of packet units in the packet distributing step(See Col. 8 lines 43-58, Col. 9 lines 41-47, fig. 5 i.e. super packet scheduler(42) in the core controller(40) for scheduling packet distribution to the appropriate destination).

Miles discloses allocating additional bandwidth based on the service requirements **(See Col. 21 lines 10-19)**.

Miles does not explicitly disclose distributing the packets to dynamically allocated additional paths.

Duser teaches distributing the packets to dynamically allocated additional paths in the same optical switching network **(See Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Miles, and distribute packets to dynamically allocated additional paths, as taught by Duser, thus providing a means to protect traffic overflow which result in packet loss by dynamically assigning additional path based on the traffic requirement, as discussed by Duser **(Page 2140 Section II Paragraph 3)**.

Consider claim 12 Miles discloses a wavelength path allocation method for a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme **(See Col. 6 lines 14-21, fig. 3-5 i.e. optical router(50 of fig. 3) that is used in optical communication network(100 of fig. 3) that perform multiplexing transmission at the ingress(60 of fig. 12a) and egress unit(160 of fig. 12b) of the optical router(50 of fig. 5) by allocating a plurality of traffic items(36) in the core controller (40 of fig. 5) using a wdm transmission scheme(fig. 12a,12b)),**

Art Unit: 2613

comprising: a step in which packets of input traffic that are distributed, with top priority given to a semifixed initial path, to the initial **(See Col. 21 lines 20-25, Col. 22 lines 32-35, fig. 13 i.e. super packets being distributed from the packet classification Quene(114) to the edge unit destination controller(116) through paths(192). the prioritization mechanism is being employed while building the super packets . This shows that each of the sixteen super packets that is fetched from the memory device(114) has priorities. One can also conclude that the first data that is sent from the memory device(114) to the edge destination controller(116) through the first path(192) has the top priority)** and paths are monitored **(See Col. 3 lines 15-20, Col. 9 lines 61-60, fig. 5 i.e. a core controller(40) for monitoring incoming data traffic )**; and a step in which allocations of the additional paths are controlled based on distribution states of packet units obtained by the monitoring**(See Col. 8 lines 43-58, Col. 9 lines 41-47, fig. 5 i.e. super packet scheduler(42) in the core controller(40) for scheduling packet distribution to the appropriate destination).**

Miles discloses allocating additional bandwidth based on the service requirements **(See Col. 21 lines 10-19).**

Miles does not explicitly disclose distributing the packets to dynamically allocated additional paths.

Duser teaches distributing the packets to dynamically allocated additional paths in the same optical switching network**(See Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow).**

Art Unit: 2613

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Miles, and distribute packets to dynamically allocated additional paths, as taught by Duser, thus providing a means to protect traffic overflow which result in packet loss by dynamically assigning additional path based on the traffic requirement, as discussed by Duser **(Page 2140 Section II Paragraph 3)**.

Consider claim 13 Miles discloses a wavelength path allocation method for a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme **(See Col. 6 lines 14-21, fig. 3-5 i.e. optical router(50 of fig. 3) that is used in optical communication network(100 of fig. 3) that perform multiplexing transmission at the ingress(60 of fig. 12a) and egress unit(160 of fig. 12b) of the optical router(50 of fig. 5) by allocating a plurality of traffic items(36) in the core controller (40 of fig. 5) using a wdm transmission scheme(fig. 12a,12b)), comprising: a step in which packets of input traffic that are distributed, with top priority given to a semifixed initial path, to the initial path (See Col. 21 lines 20-25, Col. 22 lines 32-35, fig. 13 i.e. super packets being distributed from the packet classification Quene(114) to the edge unit destination controller(116) through paths(192). the prioritization mechanism is being employed while building the super packets . This shows that each of the sixteen super packets that is fetched from the memory device(114) has priorities. One can also conclude that the first**

Art Unit: 2613

**data that is sent from the memory device(114) to the edge destination controller(116) through the first path(192) has the top priority), and paths are monitored (See Col. 3 lines 15-20, Col. 9 lines 61-60, fig. 5 i.e. a core controller(40) for monitoring incoming data traffic); a first control step in which allocations of the additional paths in a first wavelength path switching section are controlled based on distribution states of packet units obtained by the monitoring(See Col. 20 lines 5-21, fig. 13,18 i.e. a first controller or a packet classification and destination queue controller(112 of fig. 13) in the ingress edge(60 of fig. 18) of the router(50 of fig. 18) that controllers the routing of the incoming packets to the appropriate destination of the packet classification queue(114)); a step in which packets of input traffic are stored in a buffer traffic (See Col. 20 lines 8-11, fig. 13,18 i.e. a packet classification Queue or memory (114 of fig. 13) in the ingress edge(60 of fig. 18) of the router(50 of fig. 18) for storing the input traffic); a packet distributing step in which packets are fetched from the buffer(See Fig. 13 i.e. edge destination controller(116) that fetches packet from the buffer or memory device(114)), and, with top priority given to the initial path(See Col. 22 lines 32-35 i.e. prioritization mechanism being employed while building super packets), the packets are distributed to the initial path and to the additional paths (See Col. 8 lines 43-58, Col. 9 lines 41-47, fig. 5 i.e. super packet scheduler(42) for scheduling packet distribution to the appropriate destination); and a second control step in which allocations of the additional paths in a second wavelength path switching section are controlled based on distribution states of packet units in the packet distributing step(See**



Art Unit: 2613

**Col. 8 lines 43-58, Col. 9 lines 41-47, fig. 5 i.e. super packet scheduler(42) in the core controller(40) for scheduling packet distribution to the appropriate destination).**

Miles discloses the possibility of allocating additional sets of packets queues based on the service requirements **(See Col. 20 lines 28-35, fig. 13 i.e. allocating different sets of packet queues(106) for different packet service requirements for the packet data).**

Miles discloses allocating additional bandwidth based on the service requirements **(See Col. 21 lines 10-19).**

Miles does not explicitly disclose distributing the packets to dynamically allocated additional paths.

Duser teaches distributing the packets to dynamically allocated additional paths in the same optical switching network**(See Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Miles, and distribute packets to dynamically allocated additional paths, as taught by Duser, thus providing a means to protect traffic overflow which result in packet loss by dynamically assigning additional path based on the traffic requirement, as discussed by Duser **(Page 2140 Section II Paragraph 3).**

Consider claim 14 and 15 Miles and Duser disclose the wavelength path switching node apparatus according to claim 1, wherein the packet transmission control

Art Unit: 2613

section distributes packets to the additional paths (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow**) and distributing packets in a predetermined order of priorities (**See Miles: Col. 21 lines 10-19 i.e. distributing packets in a predetermined time interval**)

Consider claim 16Duser teaches the wavelength path allocation method according to claim 11, wherein, in the control step, at least one reserve additional path is allocated when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**).

Consider claim 17Duser teaches the wavelength path allocation method according to claim 12, wherein, in the control step, at least one reserve additional path is allocated when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**).

Consider claim 18Duser teaches the wavelength path allocation method according to claim 13, wherein, in the control step, at least one reserve additional path is allocated when packets are being distributed (**See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed**)

Consider claim 19Duser teaches the wavelength path allocation method according to claim 14, wherein, in the control step, at least one reserve additional path is allocated when packets are being distributed (**See Duser: Page 2140 Section II**

Art Unit: 2613

**Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed).**

Consider claim 20Ducer teaches the wavelength path allocation method according to claim 15, wherein, in the control step, at least one reserve additional path is allocated when packets are being distributed **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed).**

### ***Conclusions***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hibret A. Woldekidan whose telephone number is 27054145. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 5712723078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. W./  
Examiner, Art Unit 2613

/Kenneth N Vanderpuye/  
Supervisory Patent Examiner, Art Unit 2613